

REMARKS/ARGUMENTS

As a result of this Amendment, claims 1-5 and 14-16 are under active consideration in the subject patent application.

In the Official Action, the Examiner has:

- 1) stated that claims 1-14 stand subject to an election of species under 35 § U.S.C. 121, as follows:
 - i) Species 1: an alleged species illustrated by Figs.1 – 6a;
 - ii) Species 2: an alleged species illustrated by Fig. 6b;
 - iii) Species 3: an alleged species illustrated by Fig. 6c;
 - iv) Species 4: an alleged species illustrated by Fig. 6d; and
 - v) Species 5: an alleged species illustrated by Fig. 6e.
- 2) rejected claims 6 and 9 under 35 U.S.C. §112, second paragraph;
- 3) rejected claim 12 under 35 U.S.C. § 112, first paragraph; and
- 4) rejected claims 1-14 as being either anticipated under 35 U.S.C. §102(b) or allegedly obvious under 35 U.S.C. §103(a) in view of U.S. Patent No. 6,269,866, issued to Yamamoto et al. (the "Yamamoto reference").

With regard to Items 1-3, in response to the Election of Species, Applicant elects the invention of the alleged species shown in Figures 1 – 6a, i.e., Species

1. At least original claims 1-5 and 14, and new claims 15-16 read upon the elected species. Claims 6-13 have been cancelled without prejudice to

Applicant's right to prosecute the non-elected subject matter in related applications, or to reintroduce that subject matter when a generic claim is identified as presenting allowable subject matter. Additionally, the cancellation of claims 6-13 renders moot the rejections under 35 U.S.C. §112, first and second paragraph.

With regard to Item 4, Applicant has amended claim 1, and added new claims 15 and 16 so as to better define the present invention in light of the Yamamoto reference. Support for these changes to claim 1 and new claims 15 and 16 may be found throughout the specification and drawings as filed, and particularly at paragraphs 43-45, and in at least Figs. 1-6a. No new matter has been entered into the application as a result of these changes to the application. Claims 1-5 and 14-16 are patentable over the Yamamoto reference for the following reasons.

Applicant provides a heat transfer device that includes a heat exchange structure that contains a working fluid in a substantially closed envelope with at least one evaporator that is in flow communication with a vapor line and at least one condenser that is coupled to the at least one evaporator by the vapor line and by a liquid return line so as to provide a circulating path for the working fluid. Advantageously, the evaporator defines a reservoir for a liquid phase of the working fluid, where the evaporator comprises at least two spaced evaporation points for application of heat energy from distinct heat loads. The two spaced

evaporation points are commonly supplied with the liquid phase of the working fluid from the reservoir.

In stark contrast, Yamamoto discloses a cooling device provided with a heat pipe that is apparently intended to radiate heat from electronic equipment. The Yamamoto heat pipe includes a plate-like container made of heat transferring metal for containing a working fluid, with a heat absorbing surface that is larger than the body of the electronic device to be cooled, a metal column located within the container for transferring heat, and a hollow portion in which the working fluid exists.

Anticipation under 35 U.S.C. §102 requires that each and every element of the invention defined in the claim be met in a single prior art reference. Those elements must either be inherent or disclosed expressly, and must be arranged as described in the claim. See, Diversitech Corporation v. Century Steps, Inc., 850 F.2d 675, 7 U.S.P.Q.2d 1315 (Fed. Circuit 1988), Constant v. Advanced Micro-Devices, Inc., 848 F.2d 1560, 7 U.S.P.Q.2d 1057 (Fed. Circuit 1988), and Richardson v. Suzuki Motor Company, 868 F.2d 1226, 9 U.S.P.Q.2d 913 (Fed. Circuit 1989). Nowhere within the four corners of the Yamamoto reference is there disclosure, or even a vague suggestion of at least one evaporator and at least one condenser that are coupled by a vapor line and a liquid return line to provide a circulating path for a working fluid, as defined by amended claim 1. Moreover, nowhere within the four corners of the Yamamoto reference is there disclosure, or even a vague suggestion of at least one evaporator including a

vapor accumulator, or a turret that defines a vapor accumulator, and at least one condenser that are coupled together by a vapor line and a liquid return line to provide a circulating path for a working fluid as defined by new claims 15 and 16.

These distinctions are quite important, for they reflect significant differences in both structure and function between Applicant's claimed invention and the structures taught in Yamamoto. More particularly, Yamamoto relies upon radiant heat transfer from a portion of the plate-like container that is coupled to a heat absorbing surface by a metal column located within the container. On the other hand, Applicants device provides a vapor line and a liquid return line to create a circulating path that extends beyond the heat exchange structure that contains the working fluid and Applicant's at least two spaced evaporation points for application of heat energy from distinct heat loads, where the two spaced evaporation points are commonly supplied with the liquid phase of the working fluid from a reservoir. No such structure or functionality is even vaguely suggested by Yamamoto.

Although the Yamamoto reference utterly fails to teach or suggest such a structural arrangement as defined by Applicant's claims, the Examiner has curiously relied only upon those same teachings of Yamamoto to support the rejection of claims 1-14 under 35 U.S.C. §103(a). As the Examiner is well aware, the test for obviousness is what the combined teachings of the references would have suggested to those of ordinary skill in the art. In order for a *prima facie* case of obviousness to be established, there must be some suggestion or

motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, and the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2142 [emphasis added].

Nowhere within the Yamamoto reference is there disclosure or even a vague suggestion of at least one evaporator and at least one condenser that are coupled by a vapor line and a liquid return line to provide a circulating path for a working fluid, as defined by amended claim 1, or for that matter, the inclusion of a vapor accumulator or a turret that defines a vapor accumulator, as defined by new claims 15 and 16.

In view of the foregoing, Applicant respectfully submits that at least claims 1-5 and 14-16 are in condition for allowance. Favorable consideration is therefore requested. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

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If a telephone conference would be of assistance in advancing prosecution of the above-identified application, Applicant's undersigned Attorney invites the Examiner to telephone him at 215-979-1255.

Respectfully submitted,

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